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BASELINE ASSESSMENT OF TUBERCULOSIS MEDICINES AND LABORATORY SUPPLIES MANAGEMENT AT SELECTED PPM-DOTS SITES

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BASELINE ASSESSMENT OF TUBERCULOSIS MEDICINES AND LABORATORY SUPPLIES MANAGEMENT AT SELECTED PPM-DOTS SITES

This technical document is prepared by the USAID funded Private Health Sector Program (PHSP). It describes PHSP's strategy and approach to expand the role of the private health sector in the provision of maternal and child health (MCH) services by implementing an integrated prevention of maternal-to-child transmission of HIV (PMTCT) program in private higher and specialized clinics. The document is intended to guide the implementation of this PMTCT program.

CONTENTS

ACRONYMS

AACAHB	Addis Ababa City Administration Health Bureau
AFB	Acid fast bacilli
AIDS	Acquired Immune Deficiency Syndrome
ARHB	Amhara Regional Health Bureau
DOTS	Directly Observed Treatment Short-course
E	Ethambutol
EDTA	Ethylenediaminetetraaqcetic acid
EH	Ethambutol and isoniazid
FEFO	First-Expire-First Out
FMOH	Federal Ministry of Health
H	Isoniazid
HIV	Human Immunodeficiency Virus
INH	Isonicotinylhydrazine
LMIS	Logistics Management Information System
PHSP	Private Health Sector Program
PPM	Public Private Mix
RH	Rifampicin and isoniazid
RHB	Regional Health Bureau
RHZ	Rifampicin, isoniazid and pyrazinamide
RHZE	Rifampicin, isoniazid, pyrazinamide and ethambutol
SOP	Standard operating procedures
STM	Streptomycin
TB	Tuberculosis
TBL	Tuberculosis and leprosy
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
WHO	World Health Organization

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Ato Wordofa Bekele……..Oromia Regional Health Bureau

EXECUTIVE SUMMARY

The Private Health Sector Program (PHSP) in Ethiopia conducted an assessment of tuberculosis (TB) medicines and laboratory supplies management at selected Public Private Mix-Directly Observed Treatment Short-course (PPM-DOTS) sites in February, July and August 2010, in Addis Ababa City Administration and in Amhara and Oromia Regions. The assessment was conducted at selected service delivery points and the immediate commodity suppliers to determine current practices in TB pharmaceuticals and laboratory reagents supply management in the private health facilities. The findings and recommendations helped to identify ways to improve the system and monitor and ensure an uninterrupted supply of TB medicines and laboratory supplies. The PHSP, implemented by Abt Associates Inc. and funded by the United States Agency for International Development (USAID), conducted the assessment, in support of the Government of Ethiopia's PPM-DOTS program.

The assessment was conducted using two tools developed by the PHSP team, with input from different stakeholders. The process captured all the necessary required information by reviewing documents, using in-depth interviews, and by observation. Issues related to knowledge and skills were addressed, such as availability of TB tracer drugs, expiration of drugs, storage practices and documentation and reporting. Data were collected in 25 selected PPM-DOTS sites and 14 Town Health Offices which were the immediate commodity suppliers for the PPM-DOTS sites. The data were analyzed using an Excel spreadsheet designed to stratify information by sub-topic and by target respondents, i.e., PPM-DOTS facilities or Town Health Offices.

The assessment found that the working relationship between Town Health Offices and Regional Health Bureaus (RHB) was mainly focused on supportive supervision and provision of TB medicines selected for first-line treatment of TB infection and laboratory supplies for acid fast bacilli (AFB) smear microscopy and rapid HIV test kits. These relationships vary across the three regions. Town Health Offices of the Oromia RHB and Addis Ababa City Administration Health Bureau (AACAHB) provide both laboratory supplies and TB medicines but health offices of the Amhara Region provided only the medicines. A few were providing both AFB microscopy reagents and HIV test kits. All the Town Health Offices including AACAHB reported to have some challenges regarding health commodity supply management at PPM-DOTS sites. These included: some following a treatment protocol of using TB drugs for other purposes; not producing logistics-related reports or sending incorrect reports; shortages of health commodities at higher levels in the logistics system; and not reporting short shelf life of supplies. Possible solutions provided by the respondents to address these challenges were recorded.

It was possible to identify gaps regarding knowledge and skills for drug supply management, especially knowledge of inventory management and the logistics management information system (LMIS) by the practitioners in the three regions. No one has had any formal training in these areas. Thus there is no established stock level to initiate requisition for refill. Most reported that they initiate a requisition for refill when they are low on supplies.

The medicines for category one patients, that is rifampicin + isoniazid + pyrazinamide + ethambutol (RHZE) and ethambutol + isoniazid (EH) were found in all the assessed facilities, however, the remaining TB medicines selected for first-line treatment of TB infection were not uniformly available in the facilities.

Stock-out problems existed in most of the facilities for all types of medicines for such reasons as: failing to submit a drug consumption report or submitting it late; stock-outs at higher levels which then directly affect the stock situation at lower levels; and supplies provided with short expiration dates with

subsequent consequences of use (or non-use because of the short expiration dates). The facilities reported borrowing from other sister clinics and public health centers, sometimes subjecting patients to less effective regimens and having to refer patients as measures to solve the stock-out problem.

The facilities were supervised using a collaborative approach, i.e., PHSP together with the Town Health Offices, but most reported that the supervision did not address drug supply management except separating out expired TB drugs.

The assessment observed whether the LMIS format was available and in use, if there were shelves or cabinets for drug storage, the existence of standard operating procedures (SOP) for drug supply management, and whether there were drug receiving and issuing vouchers. The team also determined whether there were stock cards and/or bin cards and the National TB Manual, 4th Edition. There had been some initiatives to institutionalize LMIS in the three regions and it was possible to find LMIS formats in some of the facilities but in general, there was no standard LMIS in all the facilities since none of them had completed the document at the time of the assessment. Stock cards and/or bin cards, drug receiving and issuing vouchers and SOP for drug supply management were not found in any of the facilities. There were no operational guidelines for the type of shelves required for drug storage, therefore shelves and drug storage varied with some facilities actually storing the drugs on the floor, some on table tops and others in the referral box. Except for a few, most of the facilities arranged the drugs in a way that they were accessible for First-Expire-First-Out (FEFO) counting and a few were found to store expired drugs with the usable ones. Most of the rooms were observed to follow good standards of storage practices with respect to ventilation, protection from sunlight, humidity and moisture (except a few facilities where there were problems of ventilation and didn't have a well-organized storage area). All the facilities were found to stock expired TB drugs of all types, some for more than one year, and the quantity of these expired drugs was significant.

Laboratory reagents and related supplies for AFB microscopy management was one other area which the assessment tried to address. The assessment findings determined that Amhara Regional Health Bureau (ARHB) and Town Health Offices in the region were not supplying laboratory reagents and related supplies for PPM-DOTS sites unlike AACAHB and the Oromia RHB. In the two regions the supply management issue was similar with that of the medicines. More importantly, the storage bottles for AFB microscopy reagents in most facilities were transparent plastic bottles which do not protect from direct sunlight. Most of the reagents, whether they were in the standard amber glassed bottle or in plastic ones, did not have either expiration or manufacturing dates. The findings suggest that inventory control management of TB pharmaceuticals and laboratory supplies for AFB microscopy was weak. Stock records and reports on logistics were not found in any of the facilities.

In conclusion, the assessment demonstrated a need to strengthen pharmaceutical and laboratory supplies management at PPM-DOTS sites in several areas to improve both TB control and the consistent supply of medicines and laboratory commodities for TB.

The PHSP and Regional Health Bureaus with Town Health Offices need to find approaches and strategies to address these weaknesses and to plan specific activities to address them.

1. INTRODUCTION

Ethiopia ranks seventh among the world's 22 high-burden TB countries and stands third among African countries. The country had an estimated 314,267 TB cases in 2007, with an estimated incidence rate of 378 cases per 100,000 people. The World Health Organization (WHO) reported that the DOTS geographic coverage reached 95 percent of the population. However, while treatment is integrated into general health services and DOTS geographical coverage is 95 percent, due to the limited health infrastructure in the country, only approximately 60 to 70 percent of the population has access to DOTS services (1). Tuberculosis had been identified as a major public health problem in Ethiopia since the 1950s. The country has been implementing the WHO recommended DOTS strategy since 1992 (2). According to the Federal Democratic Republic of Ethiopia's Federal Ministry of Health (FMOH), the annual performance report for Health Sector Development Program III (2008/2009): TB case detection rate is 34 percent; treatment success rate is close to the 84 percent; and cure rate is 67 percent (3).

DOTS remains the heart of "Stop TB" Strategy. This strategy ensures that infectious TB patients are identified and cured using a standardized drug combination. The strategy has five key components, namely (4):

1. Political commitment with increased and sustained financing
2. Case detection through quality-assured bacteriology
3. Standardized treatment with supervision and patient support
4. An effective drug / laboratory supply and management system
5. Monitoring and evaluation system and impact measurement.

These key elements of the DOTS strategy are crucial for implementing the national TB program. More importantly, they are milestones to implement the basic DOTS strategy by building partnerships with many potential contributors which help improve TB care in terms of access, equity and quality (5).

Every day, in many parts of the world, thousands of TB patients risk their lives by accepting substandard TB services. Poor quality TB treatment not only causes unnecessary suffering and death with a high financial cost to patients and their families due to drug resistant TB, but also damages the reputation of health facilities and health staff (5) who are responsible for providing a wide range of health services.

Public-Private Mix (PPM) is one of the effective solutions to this problem. PPM promotes new approaches and partnerships for delivery of TB care by engaging all health care providers. PPM helps ensure that TB care is in line with international standards. This benefits everyone - the health provider, the sick patient, the TB program, and ultimately, the public health of the entire population (5).

Ethiopia developed implementation guidelines for PPM-DOTS in 2006.The goal of PPM-DOTS in Ethiopia is to contribute to the National TB and Leprosy Control Program in reducing morbidity and mortality and prevent the development of drug resistance through standardized diagnosis and treatment of TB and TB/HIV patients in the country. The intervention is meant to expand the DOTS coverage and thereby increase the national TB case detection and treatment success rate. In line with this, more than 83 private-for-profit health care delivery facilities were involved in TB treatment and diagnosis as of September 2010 (6).

The aforementioned private facilities have been supported by the USAID funded PHSP which is implemented by Abt Associates Inc. since 2009.The program works to increase access to and demand

for high-quality public health services in the private sector by building sustainable public-private partnerships. It builds the capacity of health care providers working in the private health sector through training and clinical seminars and also provides supportive supervision in collaboration with Regional Health Bureaus (RHB) and other public health offices.

PHSP in collaboration with different stakeholders strives to make the services provided by the private health sector meet quality standards. The program believes that effective management of drugs and medical supplies is key to TB control.

Drug supply management involves a series of activities which include: the selection of drugs relevant to the major public health problems; quantification and procurement of the selected drugs; inventory management such as storage, distribution and inventory control; and ultimately providing excellent customer service. These activities are interdependent, with the logistics management information system (LMIS) the driving force behind this. Policy, legal framework and administrative support are the basis for the integrity of the drug supply management which if in place and functioning as it should, will result in high customer service satisfaction and wise use of resources (7).

LMIS will provide the information needed for decision making on forecasting and quantification of the necessary pharmaceuticals and other medical supplies and thereby key information for allocating the necessary budget. It usually calls for the availability of three essential data items: stock-on hand, consumption rate, and losses/adjustments from every service delivery point so that appropriate decisions are made on a timely basis (7).

The "stop TB strategy," the National TB, Leprosy, and TB/HIV Prevention and Control Programs Manual, 4th Edition, and the PPM implementation guideline emphasize the importance of drug supply management for TB (2,4,6).

A poor drug supply management system usually faces frequent stock-outs, over-stocking and wastage due to expiry of drugs. A sub-standard drug supply management such as a poor inventory control system which may result in frequent stock-outs, and poor storage practices which may result in less potent drugs, has been mentioned as a cause of multi-drug resistant TB (8).

By assessing the supply system, identifying gaps and making feasible interventions, it is possible to strengthen the management system for TB drugs and other supplies for a successful program.

2. OBJECTIVES OF THE ASSESSMENT

2.1 GENERAL OBJECTIVE

The general objective of this assessment was to gather baseline data on pharmaceuticals and laboratory supplies management in selected PPM-DOTS sites in Addis Ababa City Administration and in Oromia and Amhara Regions.

2.2 SPECIFIC OBJECTIVES

The specific objectives of this assessment were:

1. To assess the TB program logistics system performance at PPM-DOTS sites, covering:
    a. Storage, inventory management, reporting mechanism, strengths and/or weaknesses of the system;
    b. To assess the management of expired TB drugs, supplies, laboratory reagents and test kits;
    c. To assess the availability of TB commodities and the requisition process;
    d. To assess the mechanism of logistics record-keeping at the facilities.
2. To assess the role of the Woreda /sub-city/Town/Health Offices in relation to PPM- DOTS sites regarding TB drugs and AFB reagents supply management.
3. To identify issues and opportunities for further inquiry and/or appropriate interventions like systems development, support to the PHSP focal person, etc.
4. Identify challenges and promising practices of TB drugs and laboratory supplies management.

3. METHODOLOGY

The assessment was conducted in 25 selected PPM-DOTS sites: five facilities in Addis Ababa City Administration (33.3 percent of the total in the city), 11 facilities in Amhara Regional State (31.4 percent of the total number in the region), and nine facilities in Oromia Regional State (29 percent of the total in the region). Fourteen health commodity suppliers for the public sector were also included in the assessment. The sites were selected based on their geographic proximity to each other (purposive sampling). Two separate assessment tools which contained both qualitative and quantitative questionnaires were developed to address PPM-DOTS sites and their immediate health commodity suppliers. The tools were also sent to the FMOH and the RHBs of Addis Ababa, Oromia and Amhara for comment and feedback. The tools developed for the PPM-DOTS sites were pre-tested in two facilities in Addis Ababa. From August 1 – 4, 2010, the assessment was conducted in five PPM-DOTS sites in Addis Ababa in collaboration with the Addis Ababa RHB; from July 19 – 30, 2010, in 11 PPM-DOTS sites and six Town Health Offices in Amhara Region in collaboration with the Amhara RHB; from August 5 – 12, 2010, in nine PPM-DOTS sites and seven Town Health Offices in Oromia Region in collaboration with the Oromia RHB.

Each PPM-DOTS site was visited with the RHB and Town Health Office Pharmaceuticals Logistics Officers and/or the TB focal person after the interview with the Town Health Offices was completed. This approach helped everyone to have a common understanding about the overall situation among all stakeholders.

The collected data were cleaned, entered in Excel, stratified by sub-topic and by target respondents according to whether the data came from the PPM-DOTS facilities or from Town Health Offices.

The main limitation of this study was that random sampling was not used to select study facilities due to a shortage of manpower and time. Also the primary interest of the assessment was to have insight into supply management and to recommend appropriate interventions to address weaknesses or gaps.

4. RESULTS OF THE ASSESSMENT

All the selected PPM-DOTS sites and Town Health Offices were contacted and data were collected. The results of each region are addressed separately in this report.

4.1 ADDIS ABABA CITY ADMINISTRATION

4.1.1 ADDIS ABABA CITY ADMINISTRATION HEALTH BUREAU

The assessment addressed the City Administration Health Bureau because it is the main owner of the program and supplier of health commodities for TB treatment of PPM-DOTS sites with technical support coming from the PSHP. The team had in-depth discussions with the personnel in the pharmacy department of the health bureau guided by questions from the assessment tool.

The working relationship between the health bureau pharmacy department and PPM-DOTS facilities is supply oriented, with the pharmacy department supplying TB drugs, AFB laboratory reagents and HIV rapid test kits every quarter upon submission of a quarterly report by the facilities. However, there was a large gap with regards to supportive supervision on health logistics issues, i.e., this was lacking.

According to the respondent, the RHB had adequate stocks of supplies in the warehouse but did not have a distribution or re-distribution (between service delivery points) plan for private health facilities though it did for public health facilities.

There had been stock-out reports from PPM-DOTS facilities to the health bureau. The re-distribution problem within the FMOH and non-adherence to treatment protocols and incorrectly completed reports from the facilities were mentioned as key reasons contributing to stock-out problems. The facilities had been reporting on expired and damaged drugs whenever this occurred but never on the consumption rate or stock-on hand. Enquiries regarding disposal of expired drugs from the private clinics had been handled using the disposal protocol of the health bureau. A disposal committee was established at the RHB and the expired supplies were disposed of in collaboration with sub-city health offices and public health facilities, supported by PHSP.

Responding to the question that asked about challenges with regard to drug logistics management for PPM-DOTS sites, the respondent mentioned the following points;

- Some facilities do not follow treatment protocols,
- Some facilities use TB drugs for other purposes/treatments,
- Some facilities do not provide accurate reports.

The following possible solutions were recommended by the bureau to address the challenges;

- Develop a strong collaboration between the program unit for TB and supply section within the health bureau to address irregularities regarding treatment protocols and other gaps,
- Provide training on drug supply management for PPM-DOTS sites,
- Develop standard operating procedures for the supply process,
- Conduct joint supportive supervision with PHSP.

The RHB suggested that PHSP could assist with preparing different types of manuals, participating in the regional technical working group, providing training on drug supply management for staff working at PPM-DOTS sites, arranging the involvement of private health facilities in review meetings to identify common solutions for gaps, and support whenever there is a shortage of reagents and supplies.

4.1.2 PPM-DOTS SITES

Two of the respondents were medical doctors and the remaining were three nurses: all were TB focal persons. All had more than two years work experience as a TB focal person, except one who had only one year experience.

4.1.2.1 SECTION I: TB DRUG SUPPLY MANAGEMENT

a) Knowledge and skills

Only two of the respondents heard about drug supply management while they were in university or during TB-DOTS training. Four out of five had no idea about the different stock levels including the required lead time and they never had training on drug supply management.

Only one facility reported that the resupply quantity of TB drugs is determined by higher level health offices. The other four determine their resupply quantity at the facility among which three use their patient load to determine the resupply quantity while the remaining one uses the consumption method for quantifying the refill quantity. Three of the five facilities initiated requisitions for refill when the stock level was running low while the other two submitted regular quarterly requisitions.

b) System

At the time of the assessment, except for RHZE and EH, most facilities do not have a uniform distribution plan for TB drugs. All facilities experienced stock-out problems with some TB drugs some of the time. There were no stock-out problems with syringes with needles or water for injections. The following table summarizes the availability of TB-tracer drugs and stock-outs experienced by the facilities.

TABLE 1: NUMBER OF FACILITIES WHICH HAVE TB TRACER DRUGS AND EXPERIENCED STOCK–OUTS IN THE LAST SIX MONTHS, ADDIS ABABA, FEBRUARY 2010

Description of items	# of facilities which have TB drugs at the time of the assessment	# of facilities experienced stock outs
Rifampicin and isoniazid (RHZ)	0	NA
RHZE	5	3
RH	3	1
EH	5	1
E	4	2
H 300mg	1	1
Streptomycin	4	1
Syringe with needle	3	0
Water for injection	3	0
	1	NA

The cause of stock-out problems varies, and all the five higher clinics reported five different reasons, for example, failure to submit drug consumption reports, untimely reporting, stock-outs at RHB, lengthy refill times, and expired drugs at the facilities. Three of the facilities addressed the stock-out problem by borrowing from other sister private higher clinics. When there were problems with syringes with needles and water for injections, facilities used the commercial market to replenish their stock and didn't consider this to be a major stock-out problem, compared to the drug situation.

Three of the facilities have disposed of expired drugs, two of which managed the process by an established committee comprising of members from the public health office, police, etc., at sub-city level and the RHB. All have reported that they received supportive supervision in the month preceding the assessment. This was conducted using a collaborative approach with staff from PHSP and the sub-city health office. The supervisory team discussed how to appropriately dispose of expired drugs in three of the clinics but nothing about drug supply management was discussed with the remaining two facilities.

Two of the facilities reported that they had placed an emergency order in the three months prior to the assessment, one of which was refilled by the supplier while the other responded that the emergency requisition was not filled because of a stock-out problem at the RHB level.

c) Observations

Except for one clinic, all the others have reported not using the LMIS format. The clinic that reported using LMIS included the rate of drug consumption. Even if most of the facilities were not using the LMIS format, they claimed to send quarterly reports on patient load to higher officials.

None of the facilities had drug-receiving vouchers nor standard operating procedures for drug supply management. The national TB manual and shelves for drug storage were available in all the assessed facilities. Drug consumption reporting and requisition forms were being distributed by the RHB at the time the assessment was conducted, and the team had seen these forms in three of the facilities. Drugs are arranged and dispensed in a manner accessible for FEFO counting in all the five facilities but three facilities did not separate expired drugs from the usable stock. Expired RHZE (six boxes), RH (two boxes), and 100 mg isonicotinylhydrazine (INH) (three boxes) were found in some of the facilities.

All of the PPM-DOTS sites appeared to have appropriate storage conditions but two facilities had problems with sufficient ventilation, and one lacked a well-organized storage area with sufficient capacity for storage. The following two figures show the two extremes of storage conditions observed in the private higher clinics in Addis Ababa.

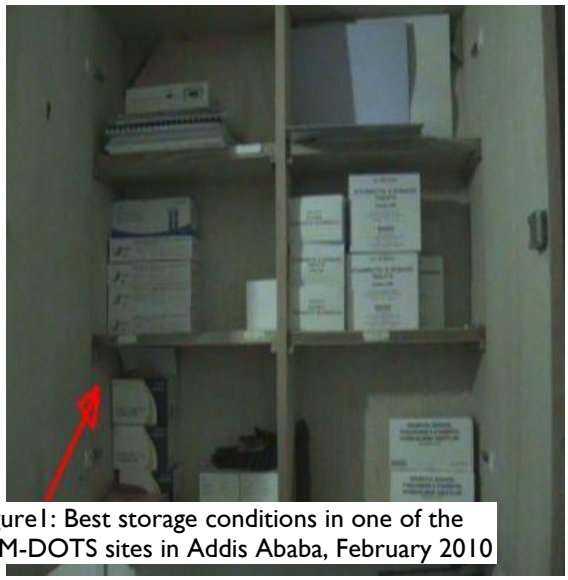


Figure1: Best storage conditions in one of the PPM-DOTS sites in Addis Ababa, February 2010

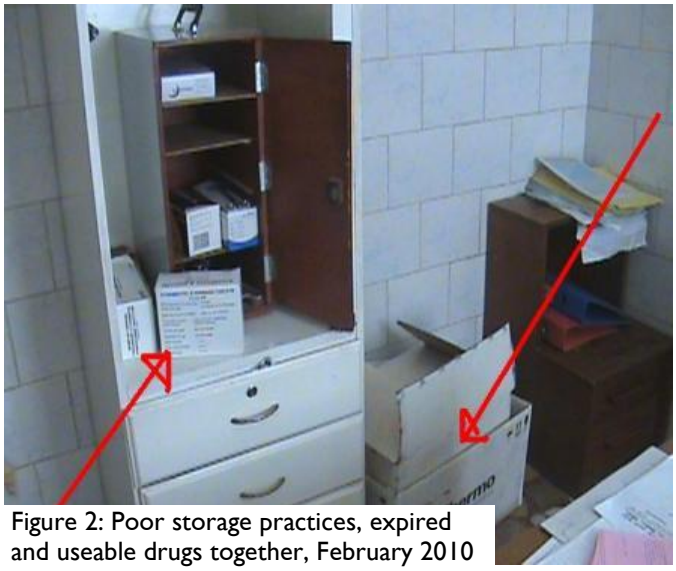


Figure 2: Poor storage practices, expired and useable drugs together, February 2010

4.1.2.2 SECTION II: LABORATORY SUPPLIES MANAGEMENT

PPM-DOTS facilities are expected to be supplied with AFB laboratory reagents by the RHB. All the facilities reported that AFB laboratory reagents and other supplies had been supplied by the RHB. The facilities were also using the local market as a source for laboratory supplies when the RHB was out of stock. One facility reported that AFB reagents were purchased from the market, and two additional facilities reported that they purchased sputum cups and slides from the market.

One or more facilities had faced stock-out problems at least for one component of the laboratory supplies necessary for AFB microscopy and HIV testing. The stock-out problem was more frequent for frosted slides (in four of the facilities) and sputum cups (in two of the facilities). Unigold was the most frequently reported supply to be out of stock among HIV test kits.

Most (three) of the facilities estimate the quantities of laboratory supplies for refill based on past consumption. One facility reported initiating a refill whenever supply quantities were depleted and one other reported patient load as their means of quantifying the amount required for resupply.

In three of the facilities, all of the AFB reagents were supplied in solution form in amber glass bottles, and for the remaining two, these were supplied in plastic bottles. All of the reagents were observed to lack manufacturing or expiry dates on the label and also didn't specify the strength of the reagents. The providers reported that they identify or manage expiry of the laboratory reagents through physical observation (color change or sedimentation). Respondents also mentioned that due to a high consumption rate, they believed they could use the reagents before the expiry date, even when the date was close at hand.

Except one facility which faced stock-out, all of the assessed facilities were using xylene for cleaning the microscope lens.

Challenges faced and comments forwarded by the facilities

During the assessment the team tried to identify challenges that the facilities were facing regarding TB health commodity supply management measures taken by the facilities, as well as taking note of stakeholders' comments.

The following are some key challenges mentioned by the facilities.

- Information gaps exist at all levels regarding stock status at the RHB and sub-city health offices. PPM-DOTS sites were expected to present a supply requisition first to the sub-city health offices and then go to the RHB. The sub-city health office approved their request without any information about the stock status at the RHB. If this could be a one-stop shopping process instead of requiring at least two steps, this could help save time and help private health facilities manage their time better.
- Staff unavailability when visits were made to the Addis Ababa Health Bureau and lengthy procedures were among the challenges the facilities were facing earlier but apparently, these problems were resolved by the time the assessment was conducted.
- Stock-out problems for reproductive health, sputum cups, frosted slides were reported as challenges.
- Syringes and needles were not supplied by the RHB.
- Shortage of trained manpower on TB-DOTS was also raised as one challenge. Some of the respondents had said that they have to work in different units other than the TB clinic and whenever they were out of the facility, a non-trained provider had to cover their work.

The facilities tried to overcome some of the challenges, for example by purchasing sputum cups and syringes in the open market.

The respondents from the different stakeholders of the services, e.g., the Addis Ababa Health Bureau and owners of the clinic, made the following suggestions for what is needed:

- Preventing stock-outs at the RHB,
- Providing training on drug supply management which is directed to focal persons,
- Conducting supportive supervision on drug supply management,
- Minimizing extra duty for PPM-DOTS focal persons, and/or provide extra payment for working during weekends,
- Providing more room/space for the service,
- Sharing of stock status information at the RHB to minimize wasting time of the private provider,
- Owners should be more willing to send staff for appropriate training,
- Checking standard/quality of the weighing scale before it is distributed to the facilities,
- Providing Unigold to one central clinic for use by the nearby facilities to prevent expiry as well as shortage of the test kits.

Discussion and Recommendations

The team was able to initiate some interventions at site level after information was collected during the assessment, for example, explaining why separating expired drugs from the usable stock is necessary, the importance of storing the drugs under standard storage conditions to maintain the shelf life of the drugs, the importance of reporting and documentation, etc. The health bureau expert on the team promised to

remedy the shortage of sputum cups, frosted slides, and lens paper including supplying pyridoxine to the sites.

The team proposes the following recommendations to the program decision-makers:

- The facilities need to initiate and follow a system for documenting health commodities' transactions. The assessment revealed that none of the assessed facilities had: a system for receiving drugs (such as receiving vouchers), stock cards and/or bin cards which are very important for inventory control, and completed or compiled LMIS reports. The LMIS report contains information on stock on hand, losses, consumption, etc., required for future procurements, and when completed should be sent to the facility's immediate supplier who then passes this information up the supply chain. PHSP can help by providing facilities with the necessary forms essential for inventory management.
- The LMIS was very poor even though there is an initiative from the health bureau of distributing a form that includes the three essential data items. This is the backbone for any supply system because forecasting and budget allocations are based on this type of specific information. It is therefore highly recommended to synergize this initiative of the health bureau and strengthen the LMIS, particularly at the health facility level.
- Supportive supervision is very important for the success of any program. Though the facilities did not receive supportive supervision from the health bureau, the technical working group has planned to conduct supportive supervision beginning July 14, 2010, both for the private as well as the public health facilities, specifically regarding management of health commodities. This activity needs to be strongly supported because it directly links the health bureau logistics section and PPM-DOTS sites.
- The assessment found that storage conditions in general were good including shelving. Because the assessment did not have an operational definition for shelving, all the observed equipment for keeping the medicines was considered to be sufficient. Some of the facilities kept their medicines in table drawers and others in cupboards. It is better if PHSP can supply standard shelves for those facilities that are short of shelves.
- Poor storage conditions, inventory management and LMIS were the main problematic areas identified in the health commodity supply system of the country. Based on this, the country developed an integrated pharmaceutical logistic master plan to address the stated problems which is still in the infant stage (9). These problems could also be manifested in PPM-DOTS sites and thus need special attention by PHSP for its supported sites.
- Recommendations mentioned by the facilities and the health bureau are worth considering for improvement.
- Training on drug supply management essentials including on-the-job training, should be supported followed by supportive supervision.

4.2 AMHARA REGIONAL STATE

There are 35 private health facilities which provide TB/HIV services in the region since 2006. Eleven PPM-DOTS sites and six Town Health Offices were included in the assessment. All the respondents of the PPM-DOTS sites were TB-focal persons and all were nurses including one junior and one bachelor of science degree nurse. Most have served one and half years on average as a TB-focal person.

4.2.1 PPM-DOTS SITES

4.2.1.1 SECTION I: TB DRUG SUPPLY MANAGEMENT

a. Knowledge and skills

Five out of the 11 interviewees had heard about drug supply management. They explained that this covers: timely supply and distribution, practicing FEFO, quantification based on patient load, following up on adverse effects of drugs, and correctly handling drugs by proper personnel. Only one interviewee had heard about the differences in stock levels and the purpose of having a buffer stock as result of having taken a training course on managing family planning commodities while working in public sector. Except this one interviewee, the others never received formal training on drug supply management or logistics training.

All the facilities reported that the quantity of resupply is determined by the facility itself; eight of them used patient load; two used past consumption data; and one facility used simple assumptions to determine the quantity of TB drugs required for refill.

Responding to the question that asked about the frequency of submitting drug requisitions, seven of them initiated refill orders whenever they ran low on supplies, sometimes two every month, one per quarter, or one very two months.

b. System

An uninterrupted drug supply chain is one of the key components of DOTS programs which are based on the principle that all core TB drugs used in the program must be available for appropriate treatment and prevention of MDR-TB when the patient needs them. All the facilities had RHZE and EH but the other TB tracer drugs were not uniformly distributed at the time of data collection. This was partly due to the fact that facilities were not in need of the drugs because there were no patients who needed them and others used government health facilities for treatment of category II patients (e.g., in Kombolcha Town). RHZ was available in only two facilities and INH and pyridoxine were not available in any of them. Four of the facilities had experienced stock-outs of RHZE, RHZ, and RH. One facility experienced a stock-out of syringes with needles. Stock-out times averaged five days for RHZE, seven for RHZ, fifteen for syringes with needles, and thirty to sixty days for RH. The following table summarizes availability of TB-tracer drugs and stock-outs experienced by the facilities.

TABLE 2: NUMBER OF FACILITIES WHICH HAVE TB TRACER DRUGS AND WHICH HAVE EXPERIENCED STOCK –OUTS IN THE LAST SIX MONTHS, AMHARA REGION, JULY 2010

Description of items	# of facilities which have TB drugs at the time of the assessment	# of facilities experienced stock outs
RHZ	2	1
RHZE	11	1
RH	5	2
EH	11	1
E	7	2
H 300mg	0	0
Streptomycin	8	0
Syringe with needle	8	1
Water for injection	9	0
Pyridoxine	1	NA

The four facilities that experienced stock-outs identified three common key reasons:

1. Stock-outs at the Town Health Office level affecting all four facilities,
2. Expiry of drugs at facility level was reported by one facility,
3. Supply of drugs with short shelf life.

The facilities had borrowed from other clinics and public health centers (one facility), referred patients (two facilities) and put patients on other treatment regimens (EH for RH stock-out by one facility) to address the drugs stock-outs.

All the 11 facilities managed disposal of expired TB drugs, nine of which returned the drugs to the Town Health Offices at least one time and four were keeping the expired drugs till the data collection date.

Ten of the assessed facilities were supervised collaboratively by the Town Health Office and PHSP staff while one reported that supportive supervision was done only by PHSP. All of the facilities had received a supportive supervision visit within one month prior to the data collection date. This visit addressed the following drug supply management related issues:

1. Importance of the drug consumption report in one facility
2. Drug storage practices in one facility
3. Discussion on segregation of expired drugs from the usable ones in seven facilities
4. Addressed how to calculate the resupply quantity of the drugs in one facility.

Seven of the facilities reported that the supportive supervision had helped them segregate expired drugs from the usable ones.

The assessment team asked interviewees if they had placed emergency orders for resupply when supplies reached a very low level, and the frequency this has been done in three to six months prior to the data collection date. Two facilities placed only one emergency order and one facility placed more than two emergency orders in the six months prior to the assessment; one facility placed one emergency order in the three months prior to the assessment. All the emergency orders for the four facilities were timely refilled by their immediate supplier.

c. Observations

Five of the 11 facilities that reported using the LMIS format which was developed and distributed by the RHB and includes the three essential data items, namely consumption rate, stock on hand and loss/adjustment. One facility reported sending the report in every month, one other every two months, two facilities have used the format to initiate drug requisitions, and one facility had received the format recently and has never sent a report in.

None of the facilities has any SOP on drug supply management or drug receiving vouchers. All of them had the National TB Manual, 4th Edition; five had drug requisition forms and the LMIS format; four of them did not have shelves or a cabinet to store the drugs. Given that there were no specified requirements for the type of shelving or cabinets to be used in storing TB drugs, all the facilities had different types of shelves, i.e., some lockable and some not, some with partitions, some made of standard materials. Some facilities were used their table drawers to store drugs, others a TV cabinet, referral box, etc. Figures in Annex 3 can provide a general picture of drug storage and shelving practices at PPM-DOTS sites.

Two of the 11 facilities did not organize their drugs and thus did not dispense their drugs by a FEFO system. Four of the facilities were found to store expired drugs along with the usable stock.

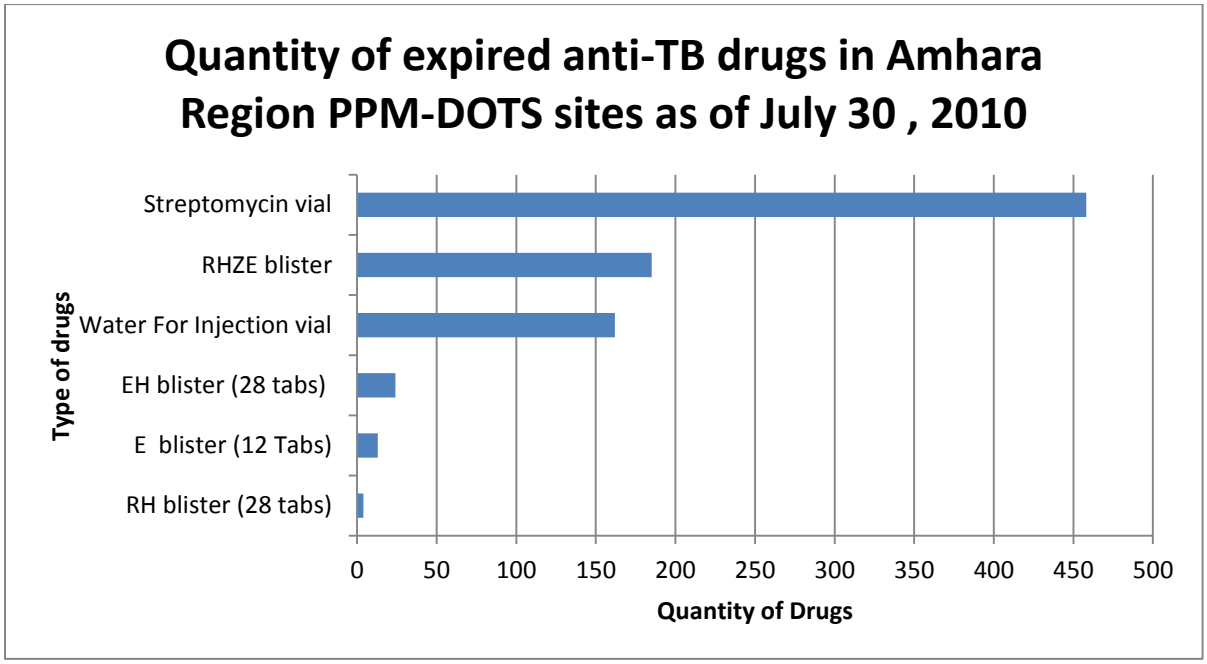
Three of the facilities disposed their expired drugs among which two managed the disposal by an established committee comprising of the public health office, police, etc., at the town level and the remaining one at the RHB. All reported that they had received supportive supervision in the month

prior to the assessment. This was done collaboratively by a team comprised of PHSP and the Town Health Office staff. The supervision team discussed the appropriate disposal process for expired drugs in three of the clinics. Nothing about drug supply management was discussed with the remaining facilities.

Two of the facilities reported that they had placed emergency orders for drug refills in the three months prior to the assessment. One facility reported timely refills by the supplier while the other responded that the emergency requisition was not refilled at all because of stock-out problems at the RHB.

The team had also recorded the type and quantity of expired drugs in each facility and found expired drugs such as streptomycin (STM) (4 facilities), RHZE (3 facilities), EH (1 facility), RH (1 facility), E (1 facility) and water for injection (1 facility). The following graph shows the type of expired drugs and their quantities.

EXPIRED TB DRUGS IN AMAHARA REGION PPM-DOTS SITES - JULY 2010



Regarding storage practices in the selected sites, drugs were protected from direct sunlight in all 11 facilities, from humidity in nine facilities and from dust in eight facilities. All of the rooms where the drugs were stored were well ventilated and illuminated. Those facilities with drugs exposed to moisture/humidity were storing the drugs on the floor because they lacked shelves. The facilities where drugs were exposed to dust did not have shelves with lockable doors to help prevent dust from reaching the drug containers. Drugs were not stored separate from non-pharmaceutical items in three of the facilities where one of them mentioned this as a mistake and the other two could not offer an explanation. The figures in Annex 2 show the storage practices of non-pharmaceutical items with the drugs. In general four facilities did not have a well-organized storage area (separate cabinet, shelves) with sufficient capacity for this.

Six of the facilities reported that they had challenges with drugs logistics management and pointed out the following challenges:

- Absence of RH so that treating pediatric and relapse patients was not practiced in one facility,

- Absence of INH for INH preventive therapy for HIV patients,
- Shortage of HIV test kits,
- Shortage of trained manpower,
- Problem of disposal of expired drugs,
- Unreliable local market to procure sputum cups,
- Shortage of AFB microscopy reagents,
- Process in supply of drugs from health centers too bureaucratic,
- Lack of collaboration in defaulter tracing,
- Insufficient supply of requested drugs received especially RH,
- No training given on LMIS,
- Weighing scale doesn't function properly,
- Referral acceptance of patients by public health facilities as it should be.

In response to the challenges, facilities referred category II and pediatric patients to the public health center, while communicating to the Town Health Office about the expired drugs. They also purchased a weighing scale if the one they had was not functioning.

The facilities mentioned that they hoped that PHSP could assist with the following:

- Organize a meeting involving the public health facilities to address patient referral challenges,
- Supply the facilities file folders for organizing different documents,
- Provide supportive supervision,
- Train on drug supply management/LMIS,
- Provide shelves,
- Help make available drug receiving vouchers.
- The facilities mentioned that they would like the following assistance from the Town Health Offices:
- Supervision to support improvement and not focus on fault finding,
- Include the private sector when providing training for services like PMTCT, ART, etc.,
- Arrange a regularly scheduled time for drug collection to ensure that the store manager is available at Town Health Offices,
- Support collection of expired and over stocked drugs,
- Feedback on defaulter tracing,
- Full supply of TB commodities.

Owners of clinics responded that they were committed to providing services but some recommended that some owners need to work harder to have more trained personnel to provide quality services.

4.2.1.2 SECTION II: LABORATORY SUPPLIES MANAGEMENT

In Amhara Regional State, with regard to the PPM-DOTS program, the region does not provide AFB microscopy reagents and related supplies unlike in Oromia and Addis Ababa. Thus, most of the facilities use the local market for their AFB microscopy supplies but there was a new initiative from the RHB to provide sputum cups and frosted slides to PPM-DOTS sites, even though there is no clear direction in place or uniformity across the facilities. Because of this, the team was not able to collect data regarding laboratory supply management.

4.2.2 TOWN HEALTH OFFICES IN AMHARA REGION

The working relationship between the Town Health Offices and PPM-DOTS sites covered:

- Supply of TB drugs by all the six Town Health Offices,
- Supply of AFB reagents by one Town Health Office,
- Supply of sputum cups by two Town Health Offices,
- Supply of HIV test kits (only KHB) from one facility.

All of the six Town Health Offices reported that they have included PPM-DOTS sites in their TB/HIV commodities distribution system. The distribution was restricted only to TB drugs with full supply and AFB reagents by one Town Health Office, and HIV test kits were supplied by two Town Health Offices.

The five Town Health Offices which do not provide AFB reagents for PPM-DOTS sites specified that there is no arrangement with the facilities for the Town Health Office to supply these to them types of supplies to the facilities. Regarding the supply of HIV test kits, "There is no clear direction from the higher officials," as was pointed out by all the four Town Health Offices as the main reason for not providing the kits.

All of the Town Health Offices had sufficient stock of all the TB tracer drugs that would last for three months except one which did not have an RH stock at all. Three of the Town Health Offices had sufficient stock of acid alcohol, methylene blue and carbol fuschin which could last for one quarter. HIV test kits` stock status was not sufficient in two Town Health Offices where they were available, and were totally lacking in the remaining four.

Three of the Town Health Offices had a distribution plan for TB drugs of which two planned the distribution every quarter and the other one planned to distribute every two months. The remaining three Town Health Offices distributed the drugs whenever a request was presented by PPM-DOTS sites: five of this group came up with the correct estimate of commodities to be distributed to private clinics based on their quarterly reports of patient load while one based their estimate on the request forwarded by the private clinic. All six Town Health Offices had a re-distribution system for the drugs which focused on whenever the expiry date was near and/or there was an over stock of drugs.

Private health facilities reported that there had been stock-out problems with two of the Town Health Offices and also a failure by the private clinics to submit timely reports. Commodity related reports were provided by the facility to two of the Town Health Offices on drug consumption, stock on hand, expired drugs and damaged drugs. The report was sent every two months to one of the Town Health Offices and whenever facilities reached a low stock level, for the other one. One reported to receive a report only on expired drugs whenever this happened and the remaining three did not receive any report at all.

Five of the six Town Health Offices reported having a system or protocol for disposal of expired and/or damaged drugs. Except for one Town Health Office, all have received requests to dispose of expired TB drugs from PPM-DOTS sites. Three of the Town Health Offices had collected the expired drugs and

one had disposed of them by an established committee at the Town Health Office and two were kept for future disposal.

All the six Town Health Offices conducted supportive supervision every quarter but the teams did not include staff from the health commodity supply section. Supportive supervision did not address the use of the consumption report; two reported supervising drug storage practices and four discussed appropriate management and disposal of expired drugs.

All reported to have challenges regarding drug supply management for PPM-DOTS sites, highlighting the following challenges:

- Shortage of some commodities at the Zonal Health Department especially for RH,
- Shortage of HIV test kits in the supply chain at zonal, regional and central levels,
- No prior notice given to the Town Health Office about newly enrolled patients, especially pediatric and re-treatment patients, to facilitate more timely requests for required drugs from higher level suppliers,
- When facility personnel went to the Town Health Office to collect supplies, often store managers were not available,
- No report of drugs in stock with short shelf life, to facilitate redistribution,
- High attrition of trained manpower,
- Untimely reporting and incomplete reports,
- Transfer-in patients were not reported by PPM-DOTS sites, thus their drug requirement was not considered by the supplier (Town Health Office),
- No training on LMIS format,
- Initiating treatment for two days and then transferring patient to other facilities (government or private), thus high transfer rate (more than 10%),
- Drugs requested for some of categories of patients (either I, II, or III) not treated in the facility, resulting in non-use and eventually expiration of some of the drug categories (which could be used in other facilities treating these categories),
- AFB microscopy supplies were not supplied,
- TB case reports and drug requisitions were not similar leading to some misunderstanding of drug quantifications.

The interviewee had recommended the following solutions to address the stated challenges;

- Supportive supervision team should include those from the supply section of the Town Health Office,
- Training should be directed for those who are more likely to remain working in the clinics and at least two trained personnel are required to address attrition,
- Provide a full supply of health commodities for services including AFB microscopy reagents,
- Encourage sites to inform the Town Health Office regarding staff relocation so that on-the-job training is provided immediately or as soon as possible for a new substitute,
- There should be a reporting column in the TB case report form for transfer-in patients so that this can be reported.

The team collected take home messages for PHSP which mainly focused on: provision of training for both the Town Health Offices and PPM-DOTS focal persons on drug supply management, increasing the number of service provision sites, taking action on private facilities that provide illegal DOTS services, engaging in discussions on the supply of AFB microscopy reagents for PPM-DOTS sites, and including pharmacy personnel during supportive supervision.

Discussion and Recommendation

Most of the providers have no information about how to manage pharmaceutical and other supplies. Those who explained that they had information about drug supply management were not able to address the essential components of what is required for drug supply management. The appropriate management of these products is very important not only to minimize resource wastage but also to provide excellent customer service by avoiding drug stock-outs. Building capacity of health care providers that are directly or indirectly involved in managing health commodities is one way to address this issue supported by supportive supervision and if necessary, on-the-job training.

The resupply system of national TB commodities is based on the quarterly report of service statistics by service delivery points. Most of the facilities, as noted in the survey findings, quantify their resupply amount based on the national guidelines. Some of the Town Health Offices were trying to implement the new pharmaceutical logistics system of the country in which a two-month refill period was specified. Some facilities refer patients to public health facilities for management of retreatment and pediatric patients to address the shortage of RH. Most of the facilities were not producing health commodity reports which are required according to the national PPM implementation guideline (6). A more standardized and institutionalized approach for reporting and refilling drug supplies in the region is still required.

A well-functioning supply system avoids stock-outs and minimizes wastage due to expiry and damage of drugs. Stock-outs were reported for most of the drugs including the most important TB regimens, RHZE and EH. All facilities were experiencing problems with expired drugs. Key reasons behind facilities with drugs close to expiration include: not practicing the FEFO system, a poor redistribution system related to too many drugs with close expiration dates, lack of comprehensive supportive supervision, and absence of logistics management. Working on and strengthening these areas will definitely minimize the loss of drugs due to close expiry dates.

Good storage practice is mandatory for the drugs to maintain their specified shelf life. It is also important to have standardized storage cabinets and to keep the specific program supplies separate from other supplies bought for other business purposes.

Most of the Town Health Offices were not providing AFB microscopy reagents, unlike the other regions and contrary to the national PPM implementation guideline (6). This could have direct or indirect implications on the quality of services because most reagents supplied by the market are not reliable both in terms of quality as well as availability. Therefore, there should be discussion with the Town Health Offices regarding how they can facilitate providing a full supply of TB commodities to private clinics as per the PPM implementation guideline.

The supportive supervision team should also include personnel working on the health commodity logistics system of the Town Health Offices to improve commodity management.

4.3 OROMIA REGION

All nine of the respondents were clinical nurses functioning as TB focal persons. All have two to five years work experience, except two who have one year experience as TB focal persons.

4.3.1 PPM-DOTS SITES

4.3.1.1 SECTION I: TB DRUG SUPPLY MANAGEMENT

a. Knowledge and skills

Only one of the respondents had heard about drug supply management during TB-DOTS training. Eight out of nine had no idea about what different stock levels of drugs indicated and what action would need to be taken based on this, nor had they any training on drug supply management.

Only one facility reported that the resupply quantity of TB drugs was determined by the Town Health Office. The remaining eight facilities determined their resupply needs based on their consumption data while one facility only made an assumption of what quantity it required to refill their supply stock. Five of the respondents put in their requisitions whenever they ran low on supplies and the other four submitted quarterly requisitions.

b. System

An uninterrupted drug supply is one of the key components of TB-DOTS programs. This is based on the principle that all core TB drugs used in the program must be available when the patient needs them for appropriate treatment and for preventing the development of MDR-TB (2). All facilities have experienced stock-out problems with all of the products except Ethambutol. The following table summarizes availability of TB drugs and stock-outs experienced by the facilities.

TABLE 3: NUMBER OF FACILITIES WHICH HAD TB TRACER DRUGS AND EXPERIENCED STOCK –OUTS IN THE LAST SIX MONTHS, OROMIA REGION, AUGUST 2010

Description of items	# of facilities which had TB drugs at the time of the assessment	# of facilities experienced stock out
RHZ	4	1
RHZE	9	2
RH	3	2
EH	9	2
E	5	0
H 300 mg	2	1
Streptomycin	4	1
Syringe with needle	4	1
Water for injection	4	1
Pyridoxine (VB6)	0	NA

There were different reasons for stock-out problems. Five facilities faced this problem due to their failure to submit a drug consumption report, one facility due to untimely reporting, and four facilities due to stock-outs at the Town Health Office. All of the facilities addressed the stock-out problems by borrowing from fellow private higher clinics. One facility also referred one of its patients to another clinic.

All nine facilities have had to dispose of expired drugs among which two managed the disposal by an established committee comprising of the public health office, police, etc., at the Town Health Office level. Four facilities returned expired drugs to the Town Health Offices for disposal, and three facilities still had expired drugs in the facility. Eight reported that they received supportive supervision in the month preceding the assessment, by a team comprised of PHSP staff and the Town Health Office and

the remaining one was last supervised more than a month before the assessment took place. The supervisory team discussed the appropriate disposal of expired drugs in only one of the facilities and the remaining eight reported that nothing was discussed on drug supply management. In the latter case, the discussion issues only focused on registration and TB/HIV management.

Three of the facilities reported that they had placed one emergency order of TB drug refill and one facility had placed two emergency orders in the six months prior to the assessment. In two of the facilities, the supplier was able to refill in time. The third facility's emergency requisition was not refilled at all because of stock-outs at the Woreda Health Office but this facility was able to borrow from another clinic.

c. Observation

Not all facilities have not been using the LMIS format. Only two facilities have requested refills based on what they reported using this format. The remaining facilities requested only the amount they needed through a letter they sent to the Town Health Office. Even if most of the facilities were not using the LMIS format, they claimed to send reports on patient load to higher officials every quarter.

Only four of the facilities had drug receiving vouchers. None of the facilities had an SOP for drug supply management. National TB manuals were available in all the assessed facilities. In three facilities drugs were arranged and dispensed according to FEFO but six facilities did not arrange their drugs in this manner. Three facilities separated expired drugs from the usable stock. The team found three boxes of expired EH in one facility and two boxes in another facility. The team also found five boxes of expired RHZE in one facility. One facility didn't know how to separate expired Ethambutol from the usable stock.

Most facilities have a single room for both TB and voluntary counseling and testing (VCT) services. Drugs were protected from direct sunlight and humidity. One clinic used the same room for TB services, examinations, and injections and providing dressings because there were not sufficient resources to have separate rooms for each of these services. After discussions between the assessment team and the clinic owner, the owner is planning to shift TB services to a separate room.

4.3.1.2 SECTION II: LABORATORY SUPPLIES MANAGEMENT

PPM-DOTS facilities are expected to be supplied with AFB laboratory reagents by their Town Health Offices. All but one of the facilities reported that laboratory reagents and other supplies had been supplied by their Town Health Offices. Some of the facilities were also using the local market as a source for laboratory supplies when they were out of stock at the Town Health Office.

Most clinics have faced stock-out problems with at least one component of laboratory supplies necessary for AFB microscopy and HIV testing, except for frost slides and slide retaining boxes. Six of nine facilities do not use xylene for cleaning their microscope because they said that it scratches the microscope lens. They used soft tissue paper and alcohol to clean the lens. Unigold is not available in some facilities, the reason being that they didn't have discordant clients and therefore didn't need to do a confirmatory test which requires Unigold. One facility had discordant clients and referred them to the hospital.

Seven of the facilities estimated the quantities needed to refill laboratory supplies based on past consumption. Two facilities reported they made their calculations based on patient load.

All of the AFB reagents were supplied in a solution form in plastic containers. Only three facilities labeled the expiration date of reagents. Seven clinics labeled the strength of their reagents. Two facilities believed that reagents did not expire; five facilities assumed that reagents were consumed before they would expire. Only two facilities had internal quality control measures to manage expiry of reagents and to assure quality.

Challenges faced and comments forwarded by the facilities

During the assessment the team tried to identify challenges that the facilities were facing regarding TB health commodity supply management and what measures need to be taken by these facilities to improve the situation.

The following were key challenges mentioned by the facilities.

- Some clinics faced problems with substandard supplies of carbol fuschin and acid alcohol; the carbol fuschin sometimes left unclear stains and acid alcohol didn't remove the stain as it should have.
- Stock-out problems for EH, RH, RHZ, sputum cups, Unigold, stat packs (for HIV testing), and KHB.
- Shortage of trained manpower on TB-DOTS. Some of the respondents said that they have had to work in different units other than the TB clinic and whenever they are out of the facility, usually a non-trained provider has had to cover the TB clinic.
- Some of clinic owners and staff consider TB treatment as an auxiliary service.
- Two facilities complained that the regional laboratory was late in collecting samples quarterly.

Some of the respondents' provided examples of what role(s) or services the Woreda Health Offices and owners of the clinic should provide. Examples are listed below:

- Woreda/Town Health Offices should ensure quality control of laboratory reagents before distributing these to clinics.
- Prevent stock-outs at Woreda Health Offices.
- Have regularly scheduled assessments of TB medicines and laboratory supply management at PPM-DOTS sites where the Woreda/Town Health Offices and facilities are involved together.
- Train focal persons on drug supply management.
- Provide supportive supervision on drug supply management.
- Minimize extra work for PPM-DOTS focal persons.
- Have separate and larger rooms for TB related services.
- Have shelves for TB drugs or cabinets for drug storage.
- Have regional laboratories collect samples every quarter.

4.3.2 OROMIA TOWN HEALTH OFFICES

The assessment also addressed seven Town Health Offices which supply TB drugs and AFB reagents in Oromia region: Adama, Ambo, Assela, Bishoftu, Modgo, Shashemene, and Nekemit. The team had in-depth discussions with the store man and TB focal persons of each Town Health Office.

The working relationship between all the Town Health Offices and PPM-DOTS facilities was basically limited to supplying TB drugs, AFB laboratory reagents and HIV rapid test kits every quarter upon submission of quarterly reports by the facilities. According to the respondents, all seven Town Health Offices conducted quarterly joint supportive supervision visits with PHSP.

Among the seven offices, five have a redistribution system and the other two do not. Three of the seven estimated the amount of commodities to be distributed based on requests forwarded by facilities. Three based their estimates on their quarterly reports received from facilities and one based theirs using a quota system. Two Town Health Offices have report format containing columns for drug consumption, stock on hand, expired/damaged drugs and the amount requested.

The assessment team observed that for TB drugs' stock status, E was out of stock in two Town Health Offices, RHZE was out of stock in two, RHZ was out of stock in four, INH was out of stock in three, and there was an excess of INH in one. RH was out of stock in three offices and EH was out of stock in one. The remaining Town Health Offices had an adequate stock for more than one quarter. Streptomycin was in excess in one Town Health Office. Pyridoxine (VB6) was not available in some of the Town Health Offices.

When we observed the stock status of reagents, only four Town Health Offices had adequate stock levels of acid alcohol, methyl blue, and carbol fuschin that would last for more than one quarter. The other three did not have enough stock for one quarter. One Town Health Office had placed an emergency order for methyl blue.

Regarding the stock status of HIV test kits, five Town Health Offices had an adequate stock of KHB, that would last for more than one quarter but the remaining offices didn't have any stock.

All the seven Town Health Offices had adequate stocks of stat packs, Unigold and capillary tubes with ethylenediaminetetraaqcetic acid (EDTA) for more than one quarter. But Unigold was not available in some facilities. One Town Health Office put in an emergency order for KHB, one for stat packs, and one had an excess stock of stat packs.

According to the respondents, the reasons for the above stock-out problems were:

- Shortage at the Oromia RHB.
- Late request to the Oromia RHB by the Town Health Offices.
- It takes a long time for preparation/reconstitution of reagents in Oromia RHB and therefore affecting stock-outs at the facility level.
- There is no redistribution system among the Town Health Offices for the excess stocks of drugs or other related supplies.

The reasons for overstock of the above commodities are:

- A push system from Oromia RHB rather than the supply chain being based on needs of the facilities and Town Health Offices, and
- Absence of a redistribution system among Town Health Offices.

Stock-out reports from PPM-DOTS facilities to the Town Health Offices, late requests from the facility, and supply shortages at the Town Health Offices were mentioned as the major reasons for the stock-out problems in facilities. Clinics have been reporting on expired and damaged drugs. Requests for disposal of expired drugs were submitted by the private clinics to four Town Health Offices and had been handled by the disposal committee of these offices with support from PHSP. Some poor quality reagents, e.g., carbol fuschin, were distributed to facilities. This occurred due to failure of the Town Health Offices to exercise quality control measures before distributing reagents.

The respondents mentioned the following challenges with regard to drug logistics management for PPM-DOTS sites:

- Some facilities sent their staff who do not work on TB for TB/HIV training.
- There is shortage of some commodities and reagents at Oromia RHB.
- Stock-out problems in TB clinics.

Possible solutions recommended for the challenges mentioned above are:

- Clinic owners should send the appropriate person for TB/HIV training.

- Oromia RHB should provide adequate supplies to the Town Health Offices.
- Develop standard operating procedures for the supply process.

The take home messages from the Town Health offices to PHSP include involving private health facilities in review meetings so as to find common solutions for gaps and financial support whenever there is shortage of reagents and supplies.

Discussion and Recommendations

As a result of the assessment, some interventions took place almost immediately (provided by the team itself), such as providing explanations about why it is necessary to identify expired drugs and the need to separate them from the usable stock, the importance of storing drugs under standard storage conditions to maintain the shelf life of the drugs, the importance of reporting and documentation, the importance of internal quality control for reagents, the advantage of maintaining adequate stocks, etc. The Oromia RHB expert in the team has planned to solve the shortage of sputum cups, frosted slides, lens tissue, KHB, and stat packs, including supplying pyridoxine at the Town Health Offices.

The team recommend to the Town Health Offices, service provider facilities and PHSP, the following:

- Town Health Offices should perform quality control measures before distributing reagents to facilities.
- Regarding the facilities in Oromia:
    - The facilities need to strengthen their documentation/reporting practices regarding health commodities transactions. Even if the stock amount was not large, the assessment revealed that none of them had a system of stock cards and/or bin cards which are very important for inventory control. They didn't compile LMIS reports. PHSP can help by providing facilities with the necessary documents and forms essential for inventory management.
    - The LMIS was very poor. Though the Adama and Bishoftu Town Health Offices have a form that includes the three essential data items, only two facilities were using it. This is the backbone for any supply system because forecasting and budget allocations are based on reliable information that comes from what is in the LMIS. So it is highly recommended to strengthen initiatives which Adama and Bishoftu Town Health Offices have initiated.
    - Some clinics have good storage conditions and others do not. Perhaps PHSP can assist and supply standard shelves for those facilities lacking them.
    - The Assela Town Health Offices suggested that it would be better if PHSP could assist with expanding the services with an additional facility because there's only one higher clinic which is providing TB treatment services.
    - The Woreda Health Offices and facilities also made recommendations worth considering toimprove services.
    - During supportive supervision, common issues discussed were only clinical and did not include drug supply management. Training on drug supply management essentials is important to strengthen, in addition to supportive supervision.

5. CONCLUSION AND GENERAL RECOMMENDATIONS

Appropriate management of pharmaceuticals and other health products is critical for the success of any program since most programs require medications and other supplies to achieve their intended goals and objectives. Most of the time program managers place less emphasis in these areas due to many valid reasons, resulting in wastage of resources, treatment interruption and inconvenience to health care clients.

It is evident from this assessment that there are a number of critical gaps in pharmaceutical and other health commodities management in the three assessed regions as explained above.

The team would like to recommend that PHSP in collaboration with service provider facilities and Town Health Offices, consider the following recommendations to address key gaps which have been identified in this report:

- Strengthening the capacity of health providers, both TB focal persons and laboratory personnel, to address logistics management, focusing on inventory management and LMIS in particular.
- Supporting private health facilities to institutionalize documentation and reporting on health commodity transactions.
- Minimizing wastage due to expiry of drugs at facilities and assisting them for timely and appropriate disposal of expired drugs.
- Improving the storage conditions of pharmaceuticals.
- Addressing the appropriate labeling of and type of storage bottles (amber glass) for laboratory reagents.
- Integrating a pharmaceutical logistics system at the woreda and town levels, in accordance with what has been done at the national level.
- Assigning professionals to provide technical support for the facilities.

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ANNEX 1: LIST OF PERSONS CONTACTED FROM FACILITIES

Addis Ababa				
Sr. No	**Name**	**Town**	**Organization**	**Phone Number**
1	Dr. Sisay Ensermu	Addis Ababa	St.Merry higher clinic	0114653755
2	Dr. Worku Adugna	Addis Ababa	Medihanialem higher clinic	0911575133
3	Sr. Yenenesh Belay	Addis Ababa	Atnasia Higher clinic	0116262110
4	Sr.Amleset Gebru	Addis Ababa	Abinet No 1 Higher clinic	0112788111
5	Sr. Firehiwote Mindaye	Addis Ababa	Bethezata higher clinic	0115158820
Amhara Regional state				
1	Ato wubushet Girma	Gonder	Birhan Tesfa medium clinic	0588110357
2	Ali Kebede	kombolcha	Hayate Medium clinic	0335513975
3	Zeleke Andargei	Bahirdar	Alemsaga higher clinic	0582
4	Sintayehu Getahun	Burei	St.Georgis Hospital	0587740025
5	Sr. Selam Tesfu	Bahirdar	St John higher clinic	0582203030
6	Sr. Rabiya Mohammed	Dessie	Wollo higher clinic	0331122541
7	Birhanu Melaku	Bahirdar	Gambi higher clinic	0582200017
8	Abdulselam kassahun	Dessie	Selam hospital	0331111325
9	Sr. Aregash Alemayehu	Gonder	Stadium Medium clinic	0581110427
10	Sr. Asnakech Birhanu	Gonder	Nure higher clinic	0581110274
11	Sr. Silenate Yemata	Debre Markose	Eyerusalem higher clinic	0587717101
Oromia regional state				
1	Ato Mekonen Mengesha	Bishoftu	Hora Higher Clinic	0114330797
2	Ato Eshetu Jada	Modgo	Samasnbet Higher clinic	0221160106
3	Sr. Woineshet Fikadu	Adama	Sr. Aklesia Hospital	0221119800/01/02/03
4	Sr.Letay-Nigus Gebrekiristos	Adama	Hibret higher clinic	0221121222
5	Sr.Yabsira Abebe	Shashemene	Feya Higher clinic	0461104373
6	Sr. Elsa Admasu	Assela	Assela Higher Clinic	0223312021
7	Ato Workneh Wirtu	Nekemit	National Higher Clinic	0576618465
8	Ato Humana Kassahun	Ambo	Adonay Medium Clinic	0112364528
9	Ato Workneh Tekle	Ambo	Ambo Higher Clinic	0112362315

ANNEX 2: LIST OF PERSONS CONTACTED FROM WOREDA/TOWN HEALTH OFFICE

Sr.No	Name	Town	Organization	Phone Number
1	Ato mersha Birara	Addis Ababa	Addis Ababa city Administration health bureau	0913107206
		Amhara Regional State		
1	Ato Yimam Ali	Kombolcha	Kombolcha town Health office	0335511612
2	Ato Dagnachew Endris	Bureie	Burei town health office	0587740535
3	w/o Asrate Kassa	Gonder	Gonder town health office	0581114169
4	Ato Tesfaye Gedamu	Dessie	Dessie town Health office	0331118063
5	Enawgaw Addisalem/sr. Aynaddis Adamu	Debremarkose	Debremarkose town health office	0587711940
6	Alemnew dessie	Bahirdar	Bahirdar town health office	0582263743
		Oromia Regional state		
1	Sr. Abaynesh Adugna	Bishoftu	Bishoftu Town Health Office	0114336484
2	Sr. Arifa Adem	Modgo	Modgo Town Health Office	0221160125
3	Sr. Tigist Teshome	Adama	Adama Town Health Office	0221114726
4	Sr.Fikirte Seyum	Assela	Assela Town Health Office	0223315997
5	Ato Dejene Gemechu	Shashemene	Shashemene Town Health Office	0461101702
6	Sr. Askale G/Mariam	Nekemit	Nekemit Town Health Office	0576615733
7	Ato Alemayehu Adela	Ambo	Ambo Town Health Office	0112365444

ANNEX 3 PICTURES OF STORAGE PRACTICES AT PPM-DOTS SITES


01/13/2007


01/14/2007


APF
01/13/2007


01/17/2007


01/13/2007


01/14/2007

ANNEX 4: QUESTIONNAIRE

QUESTIONNAIRE FOR TB DRUG AND LABORATORY REAGENTS SUPPLY MANAGEMENT AT PPM-DOTS SITES

Good morning/afternoon. My name is _____. I am an employee of PHSP-Ethiopia and working on data collection for TB drug logistic management in private health facilities supported by PHSP-Ethiopia in collaboration with Regional Health Bureaus, Woreda and Sub-city Health Offices. This assessment is organized with the theme of identifying gaps in supply management; documenting lessons, best practices, and areas for improving logistic management in the private health sector. With this assessment, PHSP-E is hoping in collecting information that will foster the TB drug logistic management at PPM-DOTS facilities. This assessment is carried-out in three regions (Addis Ababa, Amhara, Oromia) where PHSP-E is supporting PPM/DOTS programs. Please be aware that this assessment is meant to improve the quality of services being provided by private health facilities. We would like to reaffirm that PHSP-E will maintain the confidentiality of this information; and use the data only for the intended purpose.

Finally, we would like to thank for your esteemed time and interest in participating with this assessment.

Do you have any questions? (Give time if there are comments)

HEALTH FACILITY INFORMATION

NAME OF THE FACILITY: _____

☐ HOSPITAL ☐ HIGHER CLINIC ☐ MEDIUM CLINIC

TOWN/SUB-CITY:_____

REGION: _____

PHONE NUMBER: _____

DATE PPM-DOTS SERVICE STARTED: _____

INTERVIEWEE INFORMATION

NAME: _____

RESPONSIBILITY: _____

POSITION/PROFESSION: _____

YEAR OF EXPERIENCE IN THIS POSITION: _____

DATE OF DATA COLLECTION: _____

SECTION ONE: ANTI–TB DRUG SUPPLY MANAGEMENT

KNOWLEDGE AND SKILL RELATED QUESTIONS

1. Have you ever heard about drug supply management?(Yes/ No)

2. If the answer for Question Number (Q No.) 1 is "yes", explain.

   _____
   _____
   _____
   _____

3. Have you heard about

   A. Maximum-minimum stock levels (Yes/No)
   B. Buffer stocks (Yes/No)
   C. Lead time (Yes/No)

4. If the answer to question number (Q No.) 1 is "yes", explain from whom and how?

   A. Training (Yes/No)
   B. Supportive supervision (Yes/No)
   C. Woreda pharmacy/store personnel (Yes/No)
   D. Self study (Yes/No)
   E. Others, please specify_____

5. Has training been given to you on drug supply management? (Yes/No)

6. If the answer Q No 5 is "yes", how?

   A. During a logistic workshop (Yes/No)

   B. Basic TB/DOTS training (Yes/No)

   C. On-the-job training, including supportive supervision (Yes/No)

   D. Others, please specify_____

7. Who determines this facility`s resupply quantities?

   A. The facility itself (pull system)
   B. Higher-level health offices (push system)
   C. Others specify_____

8. If the facility itself determines the quantities, which methods are being used?

A. Assuming simply (Yes/No)
B. Consumption data (Yes/No)
C. Patient load (Yes/No)
D. Others
specify_____

9. How often do you put a requisition?

A. Monthly
B. Quarterly
C. Semi-annually
D. Whenever we run low on supplies
E. Others specify _____

SYSTEM RELATED QUESTIONS

10. Has stock-out occurred in the last six months for the following drugs and supplies?

Sr.No.	Description of drugs/supplies	Currently available	Stock-out occurred		Frequency of stock out	Remark
			No	Yes		
1	RHZ					
2	RHZE					
3	RH					
4	EH					
5	E					
6	H 300					
7	Streptomycin					
8	Syringe with needle					
9	Water For Injection					
10	Pyridoxine(Vb_6)					

11. If stock-out occurred for any of the items listed above, what was the cause for stock-out?

A. The private facility failed to submit timely report on drug consumption. (Yes/No)
B. The private facility failed to submit request timely.
(Yes/No)
C. The private facility failed to collect the requested drug
(Yes/No)
D. Stock-out at woreda/sub-city warehouse (Yes/No)
E. Due to expiry (Yes/No)
F. Lengthy refill procedures (Yes/No)
G. Others ,please specify _____

12. If stock-out occurred for any of anti-TB drugs, how did you manage the situation?

A. Borrowed from another clinic (Yes/No)
B. Put an emergency order to the woreda/sub-city health office (Yes/No)
C. Referred patients to another facility (Yes/No)
D. Took no measure (Yes/No)
E. Others, please specify_____

13. Have you ever managed the disposal of expired drugs? (Yes/No)

14. If the answer to Q No. 13 is "yes", how?

A. Returned the drugs to the woreda/sub-city health offices for disposal (Yes/No)
B. Returned the drugs to the regional health bureau for disposal (Yes/No)
C. Disposed by an established committee comprising the public health office, police etc., at subcity/ woreda level (Yes/No)
D. Disposed by an established committee comprising the public health office, police etc at regional health bureau level (Yes/No)
E. Disposed by a committee established in the clinic (Yes/No)
F. Still maintain (Yes/No)
G. Others, please specify _____

15. From where do you get supportive supervision?

A. Woreda health office/sub city health office (Yes/No)
B. PHSP-E staff (Yes/No)
C. Collaboration by "A" & "B" (Yes/No)
D. Nothing at all (Yes/No)
E. Others, please specify _____

16. When did you receive your most recent supervision visit?

A. Within the past one month
B. Within the past three months (Yes/No)
C. Within the past six months (Yes/No)
D. Never at all (Yes/No)

17. If supervision was conducted, what activities are addressed regarding drug supply management?

A. Discussion on use of consumption report for drug forecasting (Yes/No)
B. Observation on drug storage – appropriate arrangement, safety, air circulation, etc. (Yes/No)
C. Discussion on expired drug appropriate disposal (Yes/No)
D. Others, please specify _____

18. Did the supportive supervision you receive help you to improve your service delivery? (Yes/No)

19. If the answer to Q No. 18 is "yes", explain the areas of improvements.

_____

_____

_____

20. How many emergency orders have you placed?

In the last 6 months:	In the last 3 months:
A. None at all	A. None at all
B. Once only	B. Once only
C. Twice	C. Twice
Others, please specify _____	others, please specify _____

21. If the answer for Q 20 is "yes", how do you explain the response of your supplier?

A. Refilled timely (Yes/No)
B. Refilled after a period of stock out (Yes/No)
C. Not refilled because of untimely order (Yes/No)
D. Not refilled for Stock-out at the Woreda/sub-city warehouse itself (Yes/No)
E. Others ,please specify _____

OBESERVATIONAL QUESTIONS

22. Do you use Logistics Management Information System format? (YES/NO)

23. If the answer to Q No. 22 is "yes", which of the following are included in it?

A. Drug consumption (Yes/No)
B. Stock on hand (Yes/No)
C. Losses and adjustments (Yes/No)
D. Others, please specify _____

24. How frequently do you send the report to the Regional Health Bureau/Woreda Health Office/sub-city health office?

A. Monthly (Yes/No)
B. Quarterly (Yes/No)
C. Whenever requested (Yes/No)
D. Others, please specify _____

25. Are the following items available?

Items	Yes	No	Remark
SOP on drug supply management			
National TB Manual ,4th Edition			
Drug Requisition form			
Monthly Drug Consumption Reporting form			
Drug Receiving Voucher			
Shelves or cabinets			

26. Are drugs organized and dispensed in a manner accessible for First-Expire-First-Out/First-In-First-Out counting? (Yes/No)

27. Are damaged/expired drugs physically separated from inventory and removed from stock records? (Yes/No)

28. List expired drugs that are available in the facility during the data collection time in the following table

Name of drugs	Expiry date	Quantity
RHZ		
RHZE		
RH		
EH		
E		
H		
STREPTOMYCIN		
SYRINGE WITH NEEDLE		
WATER FOR INJECTION		
PYRIDOXINE		

29. Are drugs protected from?

A. Direct sunlight, (Yes/No)
B. Water/humidity (Yes/No)
C. Dust (Yes/No)

30. Is the room where the anti-TB drug stored well ventilated? (Yes/No)

31. Is the room where the anti-TB drug stored well illuminated? (Yes/No)

32. If the answer to Q No. 29-30 is "NO", please specify the reason.

_____

_____

_____

33. Are drugs stored separately from non-pharmaceutical items? (Yes/No)

34. If the answer for Q NO. 33 is "No", what is the reason?

_____
_____
_____

35. Is there a well organized storage area (separate cabinets, shelves) with sufficient capacity for the service? (Yes/No)

CHALLENGES AND COMMENTS

36. Do you have any challenge with regards to drug logistic management? (Yes/No)

37. If the answer for Q No. 36 is "yes", please specify.

_____
_____
_____

38. What measures did you take to address the stated challenges?

_____
_____
_____
_____

39. What do you suggest /recommend to improve the management of drug supply system? , what do you expect from?

- From PHSP:

  _____
  _____
  _____

- From Woreda/sub-city/Town Health Office:

  _____
  _____
  _____

- From owner of the clinic:

  _____
  _____
  _____
  _____

40. Do you have additional comments, questions?

_____
_____
_____

Thank you for your time and information. You have been very helpful

SECTION TWO: LABORATORY SUPPLIES

1. Would you tell us the source of the following items?

Items	Source		Other sources
	Public source: 1=Regional health bureau/2=Woreda /3= Sub-city health office	Purchase	
AFB reagents			
Slides			
Sputum cups			
HIV test kits/optional/			

2. Was there any stock-out for the items listed below in the last six months?

Items	Yes	No	Stock out period
Carbol Fuschin			
Acid Alcohol			
Methylene Blue			
Xylene			
Immersion Oil			
Frost Slide			
Sputum Cup			
Lense Tissue			
Hcl			
Slide Retaining Box			
Khb			
Stat Pack			
Unigold			

3. How do you estimate the quantity of laboratory supplies for refill?
   A. Based on consumption
   B. Based on patient load
   C. Simple assumption
   D. Other, please specify _____

4. If the laboratory supplies are delivered by Regional Health Bureau/Woreda/Sub-city health office, do you get all what you requested? (Yes/No)

5. If the answer for Q No. 4 is "NO", what is the reason?

_____

_____

_____

6. In what form of preparation do you get AFB reagents;
   A. Solution
   B. Powder/crystal
   C. sometimes in solution and sometimes in powder form

7. Are the AFB reagents properly labeled?
   7.1 Name of the reagent: (Yes/No)
   7.2 Strength of the reagent: (Yes/No)
   7.3 Expiry date/ date of reconstitution: (Yes/No)

8. Containers for reagent are amber color glass: (Yes/No)
9. If the answer for Q No 6 is "No", how do you know the expiry date of each reagent?
   A. Physical observation (color change and/or sedimentation)
   B. We believe that reagents do not expire in general
   C. Consume before expired
   D. Internal/external quality control, if external by whom? _____
   E. Others, please specify _____
10. Do you regularly use xylene to clean lenses? (Yes/No),
11. If the answer for Q No.8 is "No", please specify the reason?

_____
_____
_____

12. If the answer for Q No 8 is "No", what do you use to clean the lenses?

_____
_____
_____

13. Do you have any challenges with regard to AFB reagents, HIV test kits/optional/ and related items supply? (Yes/No)
14. If the answer is "yes" for Q No.11, please Specify.

_____
_____
_____

15. Do you have any set of recommendation to address the stated challenges?

_____
_____
_____

16. Do you have additional suggestions, comments?

_____
_____
_____

Thank you for your time and information. You have been very helpful

QUESITIONNAIRES FOR WOREDA /SUB-CITY HEALTH OFFICES

Good morning/afternoon. My name is_____. I am an employee of PHSP-Ethiopia and working on data collection for TB drug logistic management in private clinics supported by PHSP-Ethiopia in collaboration with the Oromia RHB/Woreda Health Office. This assessment is organized with the theme of identifying gaps in supply management; documenting lessons, best practices, and areas for improving logistic management in the private sector. With this assessment, PHSP-E is hoping to collect information that will foster the mutual collaboration with RHB/Woreda Health Offices for enhanced TB drug logistic management at supported periphery facilities. This assessment is carried-out in three regions (Addis Ababa, Amhara and Oromia) where PHSP-E is supporting PPM/DOTS programs. Please be aware that this assessment is meant to improve the quality of services being provided by jointly supported private health facilities. We would like to reaffirm that PHSP-E will maintain the confidentiality of this information and use the data only for the intended purpose.

Finally, we would like to thank for your esteemed time and interest in participating with this assessment. Do you have any questions?

GENERAL INFORMATION

Name of the Woreda/Town/Sub-City:_____

Number of PPM-DOTS Sites in the Woreda/Sub-City Health Office: _____

Region: _____

Telephone: _____

INTERVIEWEE INFORMATION

NAME OF RESPONSIBLE PERSON: _____

YEAR OF EXPERIENCE IN THIS POSITION: _____

DATE OF DATA COLLECTION: _____

1. Would you explain the working relationship between your office and PPM-DOTS facilities?

   _____

   _____

   _____

2. Does your TB/HIV commodities distribution system include PPM-DOTS (private health facilities)? (Yes/No)

3. If the answer for Question Number (Q No) 1 is "yes", which type of commodities do you provide?
   a. TB drugs (Yes/No)
   b. AFB reagents (Yes/No)
   c. HIV rapid test kits (Yes/No)

4. If "no" to Q 2 or if the health office does not provide any of the above commodities, please specify the reason?

   _____

   _____

   _____

5. Do you have adequate stock (at least for three months) at the Woreda/sub-city health office`s warehouse for the under listed commodities?

Drugs	Stock- in Yes/No	For How Long?	Remark
Anti-TB drugs			
Ethambutol			
RHZE			
RHZ			
INH (300/ 100)			
RH			
EH			
Streptomycin			
AFB reagents			
Acid Alcohol			
Methyl Blue			
Carbol fuschin			
HIV rapid test kits			
KHB			
Stat Pack			
Unigold			
Capillary tubes with EDTA			

6. Do you have distribution plan for TB drugs, AFB reagents & HIV rapid test kits? (Yes/No)

7. If yes, how frequently do you distribute commodities to private health facilities?
   a) Monthly
   b) Quarterly
   c) Whenever a request is presented

8. How do you come-up with the right estimate of commodities to be distributed to private clinics?
   a. Based on the request forwarded by private clinics
   b. Based on their quarterly report (By using our own assumption in line with the report submitted to our office)
   c. Use quota for distributing the stock on hand
   d. Others, please specify _____
      _____

9. Do you have a re-distribution system for anti-TB drugs and TB/HIV diagnostic commodities? (Yes/No)

10. Have there been reports of drug stock-out problem in the PPM/DOTS (private health facilities)? Yes/No

11. If the answer for Q No. 10 is "yes", how did you learn about it?
    a. Report from private facilities providing PPM/DOTS
    b. Woreda supervision visit

c. Joint Supportive Supervision with PHSP-E staff
d. Other, Specify _____

12. If the answer to Q No. 10 is "yes", what were the main reasons for stock-out at private clinics?
    a. Private facilities failed to submit timely request
    b. Private facilities failed to collect the requested drug
    c. Stock-out at woreda warehouse
    d. Stock-out at regional health bureau warehouse
    e. Other, specify _____

13. Does private clinics provide commodity related reports to woreda on:

Type of reports	Report available Yes/ No	Frequency of reporting: 1=Monthly, 2= Quarterly, 3= semi-annually	Remarks
a. Drug consumption			
b. Stock on hand			
c. Expired drugs			
d. Damaged drugs			

14. Does your office have a system or protocol for disposal of expired and or damaged drugs? (Yes/No)

15. Has your office ever received enquiry from private clinics with regard to disposal of expired drug and damaged supplies? (Yes/No)

16. If the answer for Q No.13 (above) is "yes", how the office managed the drug disposal (explain the procedure and regulation if there is any) from private?
    _____
    _____
    _____

17. Do you conduct supportive supervision to PPM-DOTs sites? (Yes/No)

18. If the answer for Q No. 18 (above) is "yes", Please illustrate the type of supports provided with regard to supply management? Please read all the under listed choice for multiple answer.
    a. Discussion on use of consumption report for drug forecasting
    b. Observation on drug storage – appropriate arrangement, safety, air circulation, etc.
    c. Discussion on expired drug appropriate disposal
    d. Other, specify

19. If the answer for Q No. 17 is "yes", how frequently do you supervise the private facilities?
    a. Monthly

b. Quarterly
c. Every six month
d. yearly

20. Do you have any challenges with regard to drug logistic management for PPM-DOTs sites?
    (Yes/No)

21. If the answer is "yes" for, please specify

_____
_____
_____

22. Do you have any set of recommendation to address the stated challenges?

_____
_____
_____

23. Any idea worth to mention as a take home message for PHSP Ethiopia in order to improve drug logistic management at private clinics? Please specify.

_____
_____
_____

24. Do you have any additional comments and suggestions? Please specify.

_____
_____
_____

Thank you for your time and information. You have been very helpful.